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(54) **SPOUT FOR LIQUID CONTAINERS.**

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Description

Technical Field

This invention relates to a pouring plug attached to a container containing liquid.

Background Art

For the purpose of reducing manufacturing costs or weight of liquid containers, paper containers such as a gable-top type paper container and the like have been conventionally used. In this connection, there has been proposed such a paper container equipped with a pouring plug made of a synthetic resin by which liquid is easily poured from the paper container and which comprises a pourer involving outer screws attached to the pouring port of a liquid container (paper container), an inner plug arranged inside said pourer in an up and down transferable manner, and a cap attached by threads to said pourer. Said pouring plug is constructed such that said inner plug is forced to break down the film covering the pouring port when opening the plug. Whilst, when storing the paper container, said cap has been arranged such that it is fitted onto the pourer (see, for example, Japanese Utility Publication No. 37828/1988 official gazette). However, in case of such a type of the pouring plug as described above, it is required to intensely press the inner plug into the plug assembly by means of fingers in order to break down the film as mentioned above, so that the problems arose that the pouring port was difficult to break down, and that it was not hygienic because the fingers touched the pourer at the time of opening the pouring port.

Furthermore, Japanese Utility Model Publication No. 4558/1987 discloses such a construction of a pouring plug in which an inner plug having a height larger than that of a pourer is placed inside said pourer, a cap is attached by threads so as to cover the inner plug projecting from said pourer and, when opening a pouring port, said inner plug is depressed while allowing the cap to descend in a rotating manner, thereby breaking down the film. In this pouring plug, however, the cap is located at a high position, the dimension of the whole pouring plug projecting from the liquid container being remarkable, so that the pouring plug itself or a site for attaching the pouring plug in the liquid container is easily damaged when the pouring plug contacts something during handling, for example during the conveyance of the liquid container. Moreover, it is required to once lower the cap rotatingly in order to break down the film, so that the opening operation for the pouring port has been troublesome.

On the one hand, as described in Japanese Utility Model Publication No. 12335/1986 and Utility Model Laid-open No. 62027/1985, there has been proposed a pouring plug being constructed such that an inner plug is screwed into its pourer and, when a cap is rotated, said inner plug descends rotatingly to break down a film; and another pouring plug being constructed such that a screw rod member engaged by threads with its inner plug is disposed at a cap and, in case of a rotating elevation of the cap, the inner plug descends due to the rotation of said screw rod member, thereby breaking down a film. In the construction of the pouring plug disclosed in Utility Model No. 12335/1986, however, it is required that a cap is allowed to rotate in a certain direction, when opening its pouring port, thereby breaking down a film, and thereafter said cap is rotated in the reverse direction.

In addition, the inner plug must be removed from the pourer so as to be capable of pouring out the contents from the liquid container, so that operations for opening the pouring operations for opening the pouring port and pouring out the contents become troublesome. Besides, it was necessary for such a complicated operation that the inner plug was attached to the pourer while rotating said inner plug, when mounting the pouring plug. On the other hand, the construction of the pouring plug described in Utility Model Laid-open No. 62027/1985 also involved the disadvantage that an inner plug must have been previously engaged by threads with a screw rod member disposed on the cap, so that the operation for attaching the pouring plug becomes complicated. Besides, since a screw portion for to be engaged by threads with said screw rod member has been provided at the central portion of the inner plug, a large flowing section cannot be constructed at the central portion of the inner plug, and as a result there is an obstacle to pouring out the contents from the liquid container.

Accordingly, the present invention has the purpose of solving the conventional disadvantages as described above, and an object thereof is to provide a pouring plug which can break down a film in an easy operation. In addition, it is another object of the present invention to provide a pouring plug having a simple construction, the attachment of which to a liquid container can easily be effected.

Disclosure of the Invention

More specifically, the present invention relates to a pouring plug comprising a pourer which is attached to the pouring port of a liquid container and the lower edge opening of which corresponds to an easily breakable film utilized for sealing said pouring port or the lower edge opening thereof, a substantially cylindrical breaking blade which is inserted into the cylindrical section of said pourer in an up and down transferable manner and is provided with a blade section at its lower edge confronting said film, and a cap attached rotatably so as to cover said cylindrical sec-

tion, said cap being provided with a pipe member which is inserted into the breaking blade, one of the opposing surfaces defined between the pipe member and the breaking blade being equipped with an inclined guiding section which inclines with a rising gradient in the opening rotational direction of the cap extending from the upper edge side to the lower edge side of the pipe member, and the other of said opposing surfaces being provided with slidable contact members which are slidably in contact with said inclined guiding section, whereby the breaking blade is arranged in a descendable manner when the cap is rotated to be opened.

Thus, when the cap is rotated in the opening direction (is rotatingly elevated), the breaking blade is forced downwards (to be lowered) by the rotation of the pipe member, and then the breaking blade breaks down the film to open the pouring opening, whereby the liquid in the container can be poured out by removing the cap.

Furthermore, in the present invention, each of said inclined guiding sections is disposed within the region of the semicircle or a narrower region of said opposing surfaces. Because of this arrangement, the breaking blade can be mounted on the pipe member of said cap without rotating the same in case of such an attachment of the breaking blade.

Moreover, according to the present invention, the pouring plug is provided with a locking means which temporarily fixes the breaking blade to the cap, and in the pouring plug the breaking blade is locked comparatively to the inner circumference of the pourer in a locatable manner. Hence, in no case said breaking blade is disengaged from the pipe member when attaching the cap to the pourer, so that unnecessary transfer, backlash and the like of the breaking blade after the attachment thereof are suppressed.

Brief Description of the Drawings

Fig. 1 is an explanatory view showing the first example of the pouring plug for a liquid container according to the present invention in an exploded manner;

Fig. 2 is an explanatory view showing the cap, with portions broken away, according to the first example;

Fig. 3 is an explanatory view viewed from the back of the cap according to the first example;

Fig. 4 is an explanatory view showing the pourer according to the first example;

Fig. 5 is an explanatory view showing the pouring plug according to the first example in a state before the pouring plug is opened;

Fig. 6 is an explanatory view showing the pouring plug according to the first example in a state after the pouring plug is opened;

Fig. 7 is an explanatory view showing the second example according to the present invention in an exploded manner;

Fig. 8 is an explanatory view illustrating the second example in a state before the pouring plug is opened;

Fig. 9 is an explanatory view illustrating the second example in a state after the pouring plug is opened;

Fig. 10 is an explanatory view illustrating the third example according to the present invention;

Fig. 11 is an explanatory view illustrating the fourth example according to the present invention;

Fig. 12 is an explanatory view illustrating the fifth example according to the present invention;

Fig. 13 is an explanatory view illustrating the sixth example according to the present invention; and

Fig. 14 is an explanatory view showing a liquid container.

The invention will be described in detail on the basis of the examples shown in Figs. 1 through 14, respectively, wherein reference numeral 1 designates a pouring plug made of a synthetic resin which is attached to a pouring port a defined on an inclined surface in the upper portion of a container, for example, a gable top type container. A pourer 2 of said pouring plug 1 is fastened to the pouring port a (by means of ultrasonic welding or the like) from the reverse side of the inclined surface in the upper part of the container (the inside of the container) as shown in Fig. 14. More specifically, the pouring plug is formed such that a pouring opening A which will be communicated with the inside of the container is surrounded by a cylindrical portion 20 protruding from said inclined surface in the upper portion of the container (the pouring opening A has been previously sealed with a later film).

Said cylindrical portion 20 is fitted with a cap 3 so as to cover the same. Opposed projections 30 extend from the lower edge on the inner surface of said cap 3 cooperating with a bead 21 positioned around the base of the cylindrical portion 20 as well as with threads 22 each of which continues from one end of the beads 21 and inclines upwards so as to be capable of transferring the cap 3 upwardly. The cap 3 is arranged such that it can be rotated, utilizing said beads 21 and threads 22 as a guide. Each of said projections 30 as well as the inclined threads 22 are positioned at opposed positions and they form a pair of components, respectively.

An easily breakable film b covers the lower edge opening of the pourer 2 of the container and the pouring opening A is sealed with said film b. A substantially cylindrical breaking blade 4 the lower edge of which is formed into a blade section 40 is inserted into the pouring openting A confronting said film b. Projections 41 extend sidewards from the breaking blade 4 at opposite positions on the upper edge section of said

breaking blade 4 in diametrical direction. The respective projections 41 engage a longitudinal protuberance 23 placed inside the cylindrical portion 20 in an up and down movable manner; thus the breaking blade 4 can descend towards the film b without rotating (it is intended to prevent the film which had been cut from dropping completely). Furthermore, slidable contact members 5 are provided in the breaking blade 4 at positions opposite to each other in diametrical direction as shown in Fig. 1, and these slidable contact members 5 are inclined surfaces 50 each of which is formed by cutting off a cylindrical wall section 42, causing the same to extend from the upper end to the side of the blade section 40 in the same direction as that of the bead 21 of the cylindrical portion 20. The inclination of these surfaces must be such that the inclined surfaces are within the respective semicircles of the cylindrical portion or narrower regions.

A pipe member 6 to be inserted into said breaking blade is suspended from the back of a top section 31 of said cap 3. And as shown in Fig. 3, inclined guiding sections 7, each bottom 70 of which is inclined from the side of the top section 31 to the lower edge along the outer surface of the pipe member 6, are disposed at positions opposed to the diametrical direction of the pipe member 6. Each of the inclined guiding sections 7 extends in the same direction as that of the bead 21 and the inclination of the inclined guiding sections 7 is very slant, these inclined guiding sections being within the semicircles of the pipe member 6, respectively. These inclined guiding sections 7 correspond to the slidable contact members 5 in the breaking blade 4, so that they are arranged such that the corresponding surfaces of the inclined guiding sections 7 and the slidable contact members 5 (the bottoms 70 and the inclined surfaces 50) can be in slidable contact with each other. Since each of the inclined guiding sections 7 and each of the slidable contact members 5 which are inclined in the same direction with each other are disposed in slidable contact between the opposite surfaces of the breaking blade and the pipe member as described above, when the cap 3 is rotated in the opening direction, the pipe member 6 is rotated and the projections 41 engage the protuberance 23. As a result, the breaking blade 4 is urged downwards, i.e. the blade is pushed down towards the film b.

In order to open the lower edge of the pouring opening of the pouring plug 1 being constructed as discribed above, it is sufficient to rotate the cap 3 in the opening direction of the pouring plug (the direction is indicated by arrow c). More specifically, the pouring opening A can be opened by such a very easy operation of rotating the cap 3 which causes the pipe member 6 to rotate, thus allowing the breaking blade 4 to descend and then to break the film b. Thereafter, the cap 3 is rotated to be removed from the pourer 2 while transferring projections 3 along the inclined threads 22, so that the contents of the container can be poured out through the pouring opening A communicating with the inside of the container. On the other hand, the breaking blade 4 which has broken down the film b due to its descent is never raised by this cap 3, even if the cap 3 is rotated in the reverse direction (in other words, since the inclined guiding sections are not engaged with the slidable contact members, said slidable contact members are never raised along the inclined guiding sections). Accordingly, since the breaking blade is positioned at the lower edge opening and does not move up and down, the pouring opening can easily be sealed again by means of the cap. In addition, broken pieces of the film are not caught by the gap defined between the breaking blade and the pourer, and at the same time broken film pieces are prevented from dropping into the container due to complete cutting of the film.

Furthermore, since both the inclined guiding sections and the slidable contact members, which form a pair of members opposite to each other along the diametrical direction thereof, are within the semicircular planes, respectively, the breaking blade can easily be mounted on the pipe member without said breaking blade having to be rotated.

Figs. 7 to 9 illustrate another example in which a cylindrical wall section 42 is not notched in a saw-toothed manner in a breaking blade 4, but spiral slidable contact members 5 corresponding to inclined guiding sections 7 in a pipe member 6 are provided in a direction extending from the upper end of the cylindrical wall section 42 to the side of a blade section 40 along the inner surface of the cylindrical wall section 42. Moreover, through-holes 43 are defined in the cylindrical wall section 42.

Unlike the above-mentioned example, the pourer 2 and the cap 3 of the present embodiment are arranged such that the cap 3 including an inside screw 32 is attached by threads to an outside screw 24 threaded around the outer circumference of a cylindrical section 20. In this construction, when the cap 3 is rotated (subjected to the opening rotation) so as to raise the same, the cap is removed from the pourer 2 to open a pouring opening A. As in the above described example, a pipe member 6 is rotated and projections 41 engage protuberances 23 when said cap 3 is rotated to be opened, so that a breaking blade 4 descends to break down a film b, thereby opening the pouring opening A. While a pair of protuberances 23 is opposed to each other in the diametrical direction of the cylindrical section 20 in the above example, many protuberances may be disposed inside the cylindrical section 20 as shown in Fig. 7.

Moreover, the pouring plug may be arranged such that a stepped section 26 equipped with pawls 25 around the base of the cylindrical section 20 is provided, and the stepped section 26 is then fitted into a pouring port a so as to engage said pawls 25 with the

circumference of the pouring port a, whereby said pouring plug 1 is fixed firmly to the main body of the container.

In the examples shown in Figs. 1 to 9, although the slidable contact members each of which is in slidable contact with the inclined guiding section of a pipe member are formed by notching the cylindrical wall portion of a breaking blade or from a spiral member along the inside of the cylindrical wall portion, the design of those members is not limited thereto. More specifically, slidable contact members 5 may be projections 51 extending from positions opposed to each other in diametrical direction on the inner surface of the upper edge of the breaking blade 4 as shown in Fig. 10, and the slidable contact members 5 which are the projections 51 are constructed such that they are in slidable contact with the bottoms of the inclined guiding sections 7. In contrast thereto, as shown in Fig. 11, said inclined guiding sections 7 are placed on the inner surface of the breaking blade 4 and the slidable contact members 5 extend from positions opposed to each other in diametrical direction on the lower edge of the pipe member, and the slidable contact members 5 which are the projections 52 are allowed to be in slidable contact with said inclined guiding sections 7, respectively.

In order to ensure the attachment of the breaking blade 4 to the pipe member 6 when mounting the cap 3 on the pourer 2, a locking means for a temporary fixation is provided. In this connection, a longitudinal groove 60 is defined on the outermost side of a pipe member 6, and at the same time a projection 44 corresponding to the longitudinal groove 60 unlockable with respect thereto extends from the inner surface of a cylindrical section 20 as shown in Fig. 12. Thus, the projection 44 is locked in the longitudinal groove 60 so that previously a breaking blade 4 is fixed temporarily to the pipe member 6, whereby the cap 3 can be easily mounted on the pourer 2 without the breaking blade 4 slipping off. The projection 33 is, of course, detached easily from the longitudinal groove 60 when the cap 3 is rotated to be opened after the mounting thereof. In this case, the position of the longitudinal groove and the projection may be reversed.

Moreover, as shown in Fig. 12, when protuberances 27, with respect to which projections 41 are provided on the upper edge of the outside of the breaking blade 4 (four projections are disposed at the four corners of the breaking blade in Fig. 12) are locked and which can be easily climbed over by said projections, are disposed circumferentially on the inner side at the upper edge of the cylindrical section 20, the breaking blade is located temporarily at the upper portion before breaking a film, whereby an unguarded up and down movement of the breaking blade 4 can be suppressed. In this case, it is not necessary that such protuberances are continuous in circumferential direction, but may be discontinuous in so far as said projections 41 can be locked thereby.

While the film is attached so as to seal the lower edge opening of the pourer in the above-mentioned examples, the pourer 2, in turn the pouring plug may be attached in such a manner that the pouring port a of a liquid container is sealed with a film b.

Industrial Applicability

As described above, according to the present invention, the pouring plug comprises a pourer which is attached to the pouring port of a liquid container, the lower edge opening of said pourer being covered by an easily breakable film utilized for sealing said pouring port a substantially cylindrical breaking blade which is inserted into the cylindrical section of said pourer in an up and down transferable manner and provided with a blade section at its lower edge confronting said film; and a cap attached rotatably so as to cover said cylindrical section; said cap being provided with a pipe member which is inserted into the breaking blade; one of the opposing surfaces defined between the pipe member and the breaking blade being equipped with an inclined guiding section which inclines with a rising gradient in the opening rotational direction of the cap extending from the upper edge side to the lower edge side of the pipe member; and the other of said opposing surfaces being provided with slidable contact members which are in slidable contact with said inclined guiding section, wherein the breaking blade is arranged in a descendable manner when the cap 3 is rotated to be opened. Thus, the breaking blade descends by a simple operation of rotating the cap to break down the film and open the pouring opening, and as a result such breaking or opening operation becomes easy since a user never touches the pourer, the breaking blade, the film and the like when breaking down the sealing in a container. Thus, such a container is hygienic.

Claims

1 A pouring plug for a liquid container comprising

a pourer (2) which is attached to a pouring port of the liquid container, the lower edge opening (A) of said pourer being covered by an easily breakable film (a) utilized for sealing said pouring port;

a substantially cylindrical breaking blade (4) which is inserted into the cylindrical section of said pourer (2) in an up and down transferable manner and provided with a blade section at its lower edge confronting said film; and

a cap (3) attached rotatably so as to cover said cylindrical section; characterized in that said cap (3) is provided with a pipe member (6) which is inserted into the breaking blade (4), that one of the opposing surfaces defined between the pipe member (6) and

the breaking blade (4) is equipped with an inclined guiding section (7) which inclines with a rising gradient in the opening rotational direction of the cap (3) extending from the upper edge side to the lower edge side of the pipe member (6); and that the other of said opposing surfaces is provided with slidable contact members (5) which are slidably in contact with said inclined guiding section (7), wherein the breaking blade (4) is arranged in a descendable manner, when the cap (3) is rotated to be opened.

2 A pouring plug for a liquid container according to claim 1, characterized in that each of said inclined guiding sections (7) is disposed within the region of the semicircle or a narrower region of said opposing surfaces.

3 A pouring plug for a liquid container according to one of claims 1 and 2, characterized in that each of the slidable contact members (5) slidably in contact with said inclined guiding section (7) is either a projection or an inclined surface.

4 A pouring plug for a liquid container according to one of claims 1 to 3, characterized in that either the inclined guiding section or the slidable contact members (5) are formed by notching the upper circumference of said breaking blade (4).

5 A pouring plug for a liquid container according to one of claims 1 to 3, characterized in that the inner circumference of said breaking blade (4) is provided with slidable contact members (5) formed by a pair of inclined surfaces along said inner circumference.

6 A pouring plug for a liquid container according to one of claims 1 to 5, characterized in that a locking means for temporarily fixing said breaking blade (4) to said cap (3) is provided.

7 A pouring plug for a liquid container according to one of claims 1 to 6, characterized in that said breaking blade (4) is locked comparatively to the inner circumference of said pourer (2).

Patentansprüche

1. Ausgießverschluß für einen Flüssigkeitsbehälter, der umfaßt:
   - einen an einer Ausgießöffnung des Flüssigkeitsbehälters angebrachten Spund (2), wobei die Unterkantenöffnung (A) dieses Spundes durch einen leicht aufreißbaren Film (a), der zum Verschließen der genannten Ausgießöffnung verwendet wird, abgedeckt ist;
   - ein im wesentlichen zylindrisches Aufreißmesser (4), das in das Zylinderstück des genannten Spundes (2) in einer aufwärts sowie abwärts verlagerbaren Weise eingesetzt und mit einem Messerprofil an seiner unteren, dem besagten Film gegenüberliegenden Kante versehen ist;
   - eine drehbar so angebrachte Kappe (3), daß sie das besagte Zylinderstück abdeckt;

   dadurch gekennzeichnet,
   - daß die erwähnte Kappe (3) mit einem in das Aufreißmesser (4) eingesetzten Rohrstück (6) versehen ist, daß eine der einander gegenüberliegenden, zwischen dem Rohrstück (6) sowie dem Aufreißmesser (4) bestimmten Flächen mit einem schrägen Führungselement (7) ausgestattet ist, das sich mit einem zunehmenden Gradienten in der Öffnungsdrehrichtung der Kappe (3) von der Oberkantenseite zur Unterkantenseite des-Rohrstücks (6) geneigt erstreckt, und daß die andere der besagten gegenüberliegenden Flächen mit Gleitberührungsgliedern (5) versehen ist, die in Berührung mit dem erwähnten schrägen Führungselement (7) gleitend verschiebbar sind, wobei das Aufreißmesser (4) für ein absteigendes Verhalten eingerichtet ist, wenn die Kappe (3) zu ihrem Öffnen gedreht wird.

2. Ausgießverschluß für einen Flüssigkeitsbehälter nach Anspruch 1, dadurch gekennzeichnet, daß jedes der erwähnten schrägen Führungselemente (7) innerhalb des Bereichs des Halbkreises oder eines engeren Bereichs der besagten gegenüberliegenden Flächen angeordnet ist.

3. Ausgießverschluß für einen Flüssigkeitsbehälter nach einem der Ansprüche 1 und 2, dadurch gekennzeichnet, daß jedes der Gleitberührungsglieder (5), das gleitend verschiebbar mit dem erwähnten schrägen Führungselement (7) in Berührung ist, entweder ein Buckel oder eine geneigte Fläche ist.

4. Ausgießverschluß für einen Flüssigkeitsbehälter nach einem der Ansprüche 1 bis 3, dadurch gekennzeichnet, daß entweder das schräge Führungselement oder die Gleitberührungsglieder (5) durch Ausklinken des oberen Umfangs des erwähnten Aufreißmessers (4) gebildet sind.

5. Ausgießverschluß für einen Flüssigkeitsbehälter nach einem der Ansprüche 1 bis 3, dadurch gekennzeichnet, daß der Innenumfang des erwähnten Aufreißmessers (4) mit Gleitberührungsgliedern (5) versehen ist, die aus einem Paar von längs des genannten Innenumfangs schrägliegenden Flächen gebildet sind.

6. Ausgießverschluß für einen Flüssigkeitsbehälter nach einem der Ansprüche 1 bis 5, dadurch gekennzeichnet, daß eine Verriegelungseinrichtung vorgesehen ist, um vorübergehend das erwähnte Aufreißmesser (4) an der genannten Kappe (3) zu befestigen.

7. Ausgießverschluß für einen Flüssigkeitsbehälter nach einem der Ansprüche 1 bis 6, dadurch gekennzeichnet, daß das erwähnte Aufreißmesser (4) relativ zum Innenumfang des besagten Spundes (2) arretiert wird.

Revendications

1.- Un bouchon verseur pour un récipient à liquide, comprenant

un verseur (2) qui est fixé à un orifice verseur du récipient à liquide, l'ouverture de bord inférieur (A) dudit verseur étant recouverte par un film facile à rompre (a) utilisé pour sceller ledit orifice verseur ;

une lame de rupture sensiblement cylindrique (4) qui est insérée dans la partie cylindrique dudit verseur (2) de manière déplaçable vers le haut et vers le bas, et munie d'une partie de lame au niveau de son bord inférieur faisant face audit film ; et

un capuchon (3) fixé de manière rotative, de façon à recouvrir ladite partie cylindrique ; caractérisé en ce que ledit capuchon (3) est muni d'un élément de tube (6) qui est inséré dans la lame de rupture (4), en ce que l'une des surfaces opposées définies entre l'élément de tube (6) et la lame de rupture (4) est équipée d'une partie de guidage inclinée (7) qui s'incline avec un gradient ascendant dans le sens de rotation ouvrant du capuchon (3) et s'étendant du côté de bord supérieur au côté de bord inférieur de l'élément de tube (6) ; et en ce que l'autre desdites surfaces opposées est munie d'éléments de contact coulissants (5) qui sont en contact, de manière coulissante, avec ladite partie de guidage inclinée (7), la lane de rupture (4) étant disposée de façon à pouvoir descendre lorsque le capuchon (3) est tourné pour être ouvert.

2.- Un bouchon verseur pour un récipient à liquide selon la revendication 1, caractérisé en ce que chacune desdites parties de guidage inclinées (7) est disposée à l'intérieur de la zone du demi-cercle ou d'une zone plus étroite desdites surfaces opposées.

3.- Un bouchon verseur pour un récipient à liquide selon l'une des revendications 1 et 2, caractérisé en ce que chacun des éléments de contact coulissants (5), qui sont en contact, de manière coulissante, avec ladite partie de guidage inclinée (7), est soit une saillie soit une surface inclinée.

4.- Un bouchon verseur pour un récipient à liquide selon l'une des revendications 1 à 3, caractérisé en ce que soit la partie de guidage inclinée soit les éléments de contact coulissants (5) sont formés en encochant la circonférence supérieure de ladite lame de rupture (4).

5.- Un bouchon verseur pour un récipient à liquide selon l'une des revendications 1 à 3, caractérisé en ce que la circonférence intérieure de ladite lame de rupture (4) est munie d'éléments de contact coulissants (5) formés par une paire de surfaces inclinées le long de ladite circonférence intérieure.

6.- Un bouchon verseur pour un récipient à liquide conforme à l'une des revendications 1 à 5, caractérisé en ce qu'un moyen de verrouillage pour immobiliser temporairement ladite lame de rupture (4) sur ledit capuchon (3) est prévu.

7.- Un bouchon verseur pour un récipient à liquide selon l'une des revendications 1 à 6, caractérisé en ce que ladite lame de rupture (4) est verrouillée par rapport à la circonférence intérieure dudit verseur (2).

FIG. 1

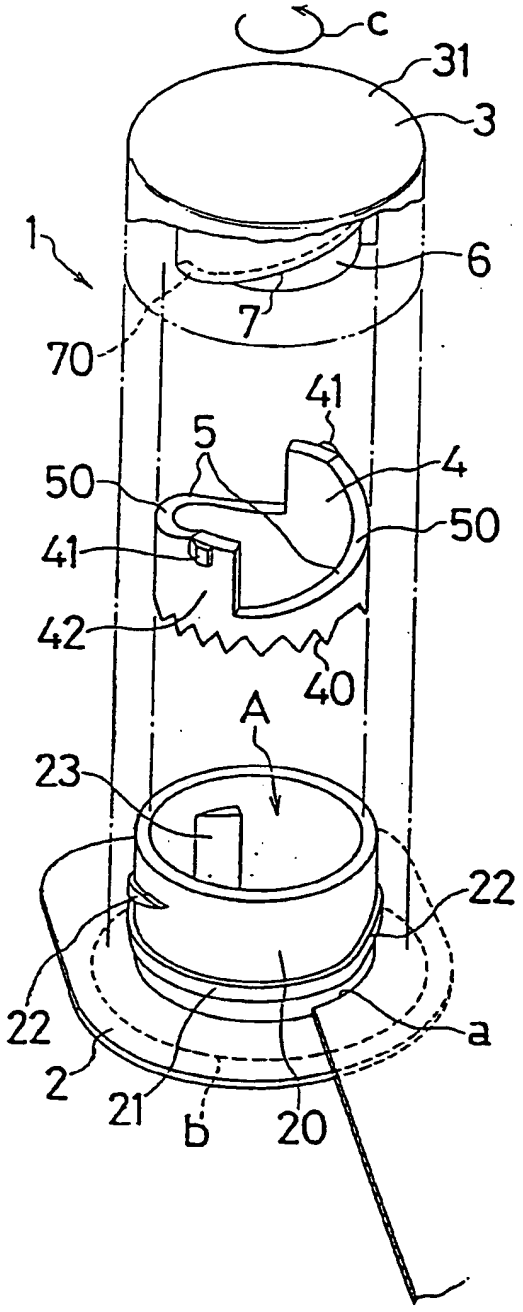


FIG. 2

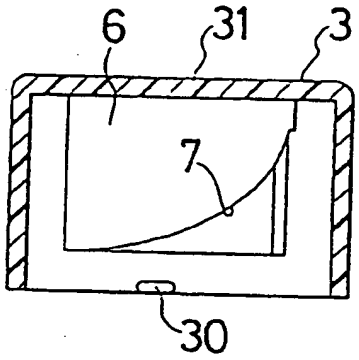


FIG. 3

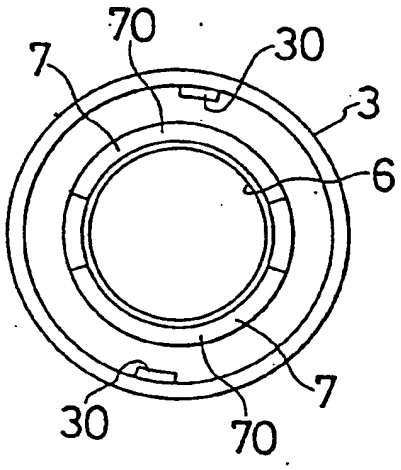


FIG. 4

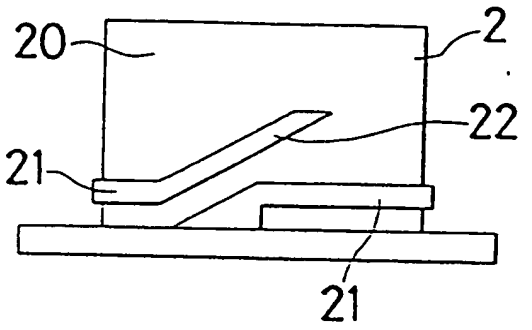


FIG. 5

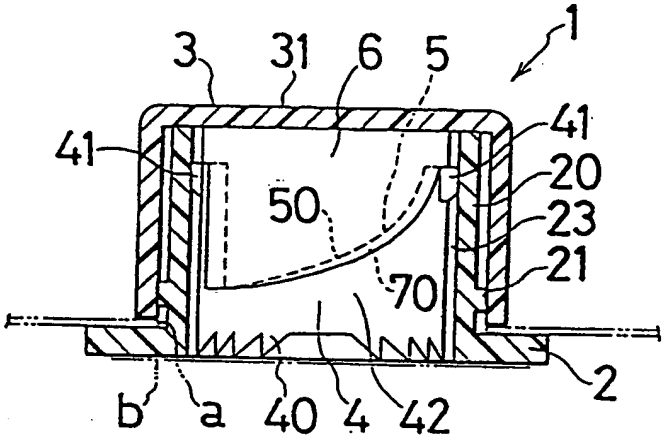


FIG. 6

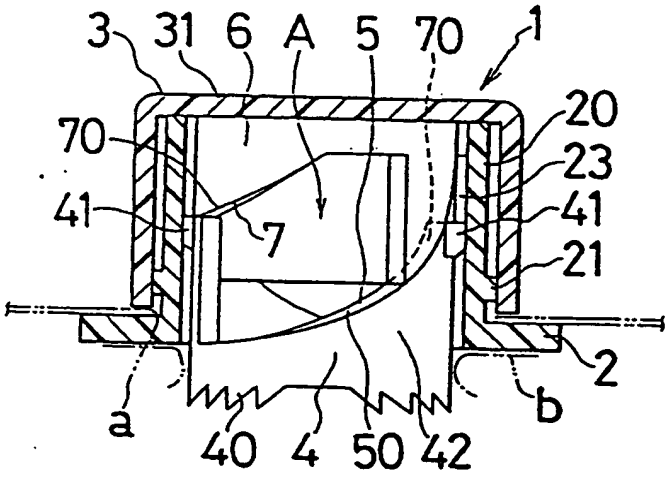


FIG. 7

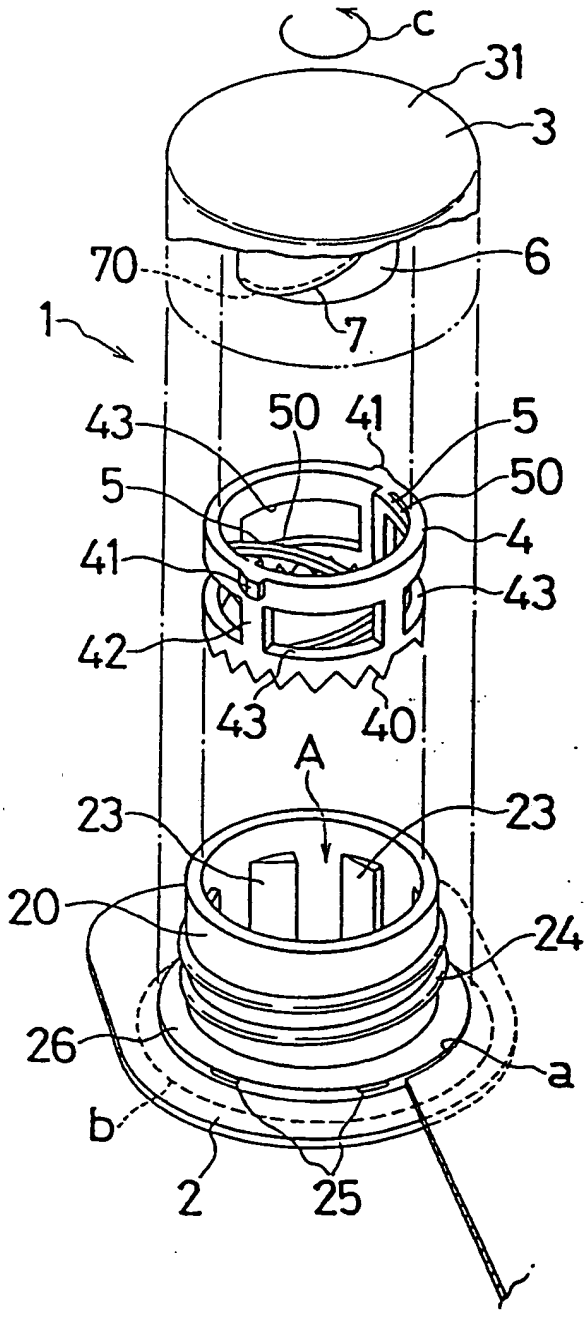
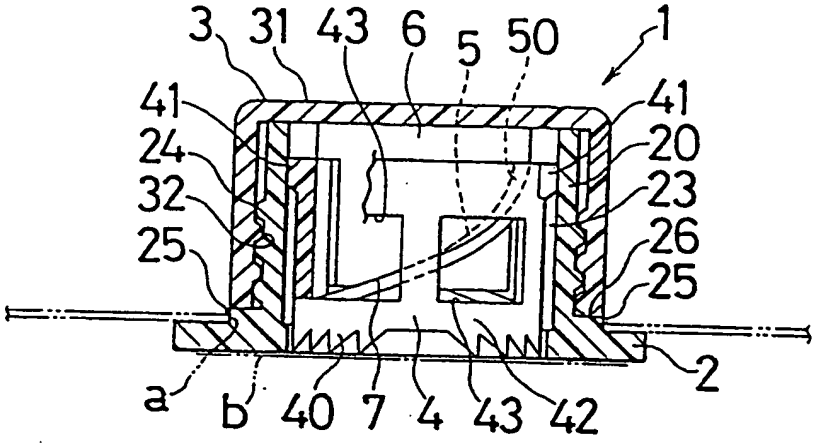


FIG. 8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42

FIG. 9

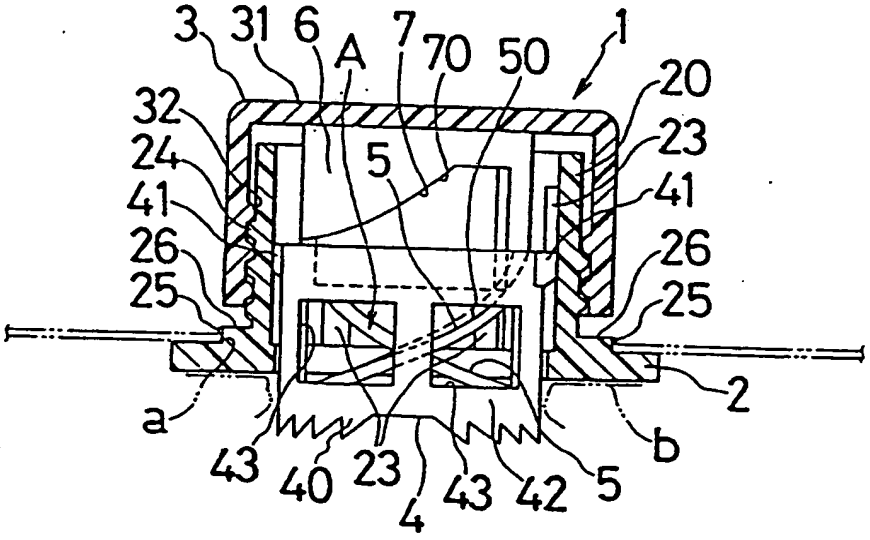
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FIG. 10

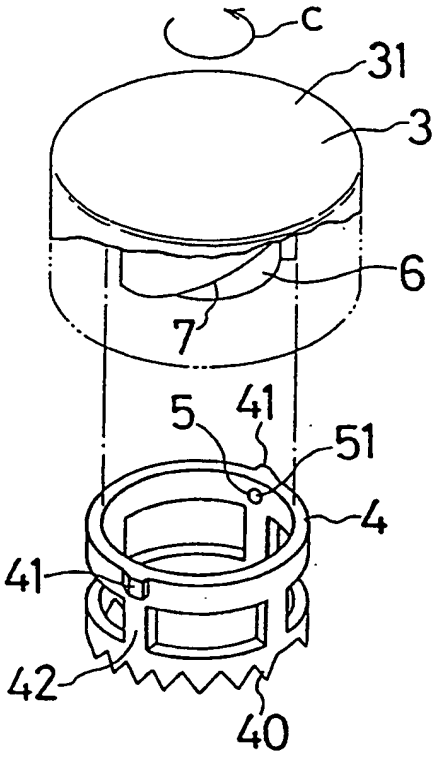

FIG. 11

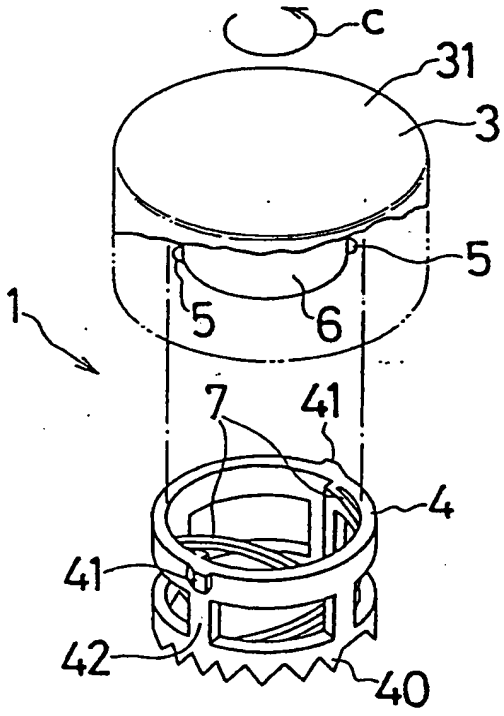

FIG. 12

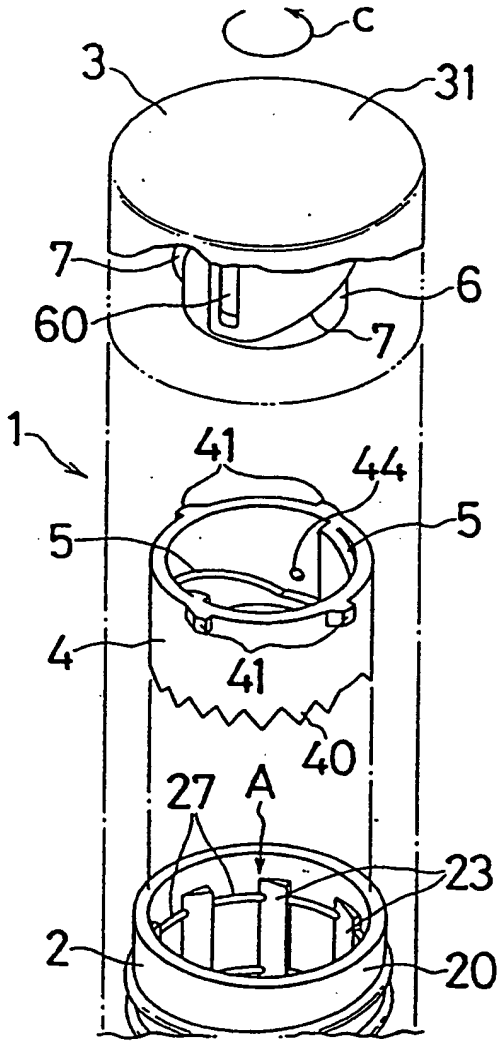

FIG. 13

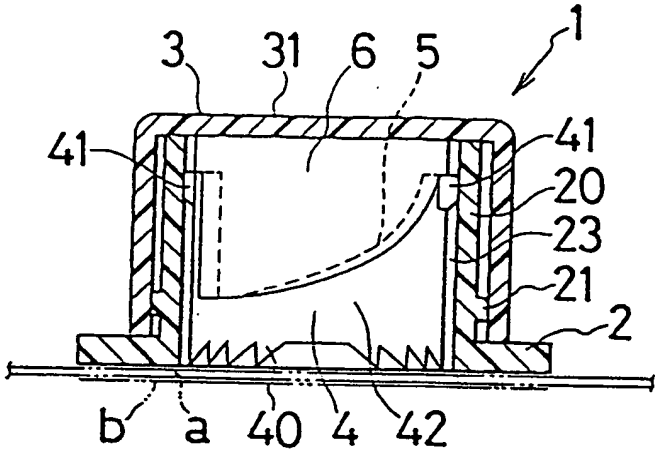

FIG. 14